



**REQUEST FOR BID**

**BID NUMBER W11238**

**Establishment of a Panel of Service Providers for Supply and Delivery of Current Gauging Equipment for the Measurement of Velocity and Discharge in Open Channels by Using the Acoustic Doppler and Tracer Methods for a Period of 24 Months**

CLOSING DATE:  
**19 September 2017**

CLOSING TIME:  
**11:00 am**

**Compulsory Briefing Session**

**Date:** 06 September 2017

**Time:** 10h00

**Venue:** Department of Water and Sanitation  
173 Francis Baard Street, Emanzini Building G18 Boardroom  
Pretoria  
0001

**SUBMIT TENDER DOCUMENT**

**TO**

POSTAL ADDRESS:  
DIRECTOR-GENERAL: WATER AND  
SANITATION  
PRIVATE BAG X 313  
PRETORIA,0001

**OR**

**TO BE DEPOSIT IN:**  
THE TENDER BOX AT THE ENTRANCE  
OF ZWAMADAKA BUILDING  
157 FRANCIS BAARD STREET  
(FORMERLY SCHOEMAN STREET)  
PRETORIA,0002

**TENDERER:** (Company address and stamp)

## TABLE OF CONTENTS

1	INVITATION TO BID (SBD 1).....	3-4
2	DECLARATION OF INTEREST (SBD 4).....	5-8
3	PREFERENCE POINTS CLAIM FORM (SBD 6.1).....	9-13
4	DECLARATION OF BIDDER'S PAST SCM PRACTICES (SBD8).....	14-15
5	CERTIFICATE OF INDEPENDENT BID DETERMINATION (SBD 9).....	16-18
6	GENERAL CONDITIONS OF CONTRACT.....	19-31
7	SPECIAL CONDITION OF CONTRACT.....	32-33
8	BEE REPORTING.....	34
9	TERMS OF REFERENCE AND EVALUATION CRITERIA ( ).....	35-65

## INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE DWS

BID NUMBER: **W11238** CLOSING DATE: **19 September 2017**

CLOSING TIME: **11:00**

**DESCRIPTION: Establishment of a Panel of Service Providers for Supply and Delivery of Current Gauging Equipment for the Measurement of Velocity and Discharge in Open Channels by Using the Acoustic Doppler and Tracer Methods for a Period of 24 Months**

**The successful bidder will be required to fill in and sign a written Contract Form (SBD 7).**

BID DOCUMENTS MAY BE POSTED TO:

**Private Bag x313,  
Pretoria,  
0001**

**OR**

DEPOSITED IN THE BID BOX SITUATED AT *(STREET ADDRESS)*

**Tender Box, Zwamadaka Building  
157 Francis Baard Street (Formerly Schoeman),  
Pretoria  
0001**

**Bidders should ensure that bids are delivered timeously to the correct address. If the bid is late, it will not be accepted for consideration.**

The bid box is generally open 24 hours a day, 7 days a week.

ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS – (NOT TO BE RE-TYPED)

THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2011, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT

THE FOLLOWING PARTICULARS MUST BE FURNISHED  
(FAILURE TO DO SO MAY RESULT IN YOUR BID BEING DISQUALIFIED)

NAME OF BIDDER.....

POSTAL ADDRESS.....

STREET ADDRESS.....

TELEPHONE NUMBER CODE.....NUMBER.....

CELLPHONE NUMBER.....

FACSIMILE NUMBER CODE ..... NUMBER.....

E-MAIL ADDRESS.....

VATREGISTRATIONNUMBER.....

HAS AN ORIGINAL AND VALID TAX CLEARANCE CERTIFICATE BEEN SUBMITTED? (SBD 2) YES or NO

HAS A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE BEEN SUBMITTED? (SBD 6.1) YES or NO

IF YES, WHO WAS THE CERTIFICATE ISSUED BY?

AN ACCOUNTING OFFICER AS CONTEMPLATED IN THE CLOSE CORPORATION ACT  
(CCA).....☐

A VERIFICATION AGENCY ACCREDITED BY THE SOUTH AFRICAN ACCREDITATION SYSTEM  
(SANAS);OR.....☐

A REGISTERED AUDITOR.....☐  
[TICK APPLICABLE BOX]

**(A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE MUST BE SUBMITTED IN ORDER TO  
QUALIFY FOR PREFERENCE POINTS FOR B-BBEE**

ARE YOU THE ACCREDITED REPRESENTATIVE  
IN SOUTH AFRICA FOR THE GOODS / SERVICES / WORKS OFFERED? YES or NO

[IF YES ENCLOSE PROOF]

SIGNATURE OF BIDDER:.....

DATE:.....

CAPACITY UNDER WHICH THIS BID IS  
SIGNED.....

TOTAL BID PRICE.....TOTAL NUMBER OF ITEMS OFFERED.....

---

**ANY ENQUIRIES REGARDING THE BIDDING PROCEDURE MAY BE DIRECTED TO:**

**Department: Department of Water and Sanitation**

**Contact Person: Mr. Syabonga Gwamanda**

**Tel: 012 336 6611**

**Fax: 086 459 0176**

**E-mail address: [gwamandas@dws.gov.za](mailto:gwamandas@dws.gov.za)**

**ANY ENQUIRIES REGARDING TECHNICAL INFORMATION MAY BE DIRECTED TO:**

**Contact Person: Musariri Musariri**

**Tel: 021 941 7949**

**E-mail address: [musaririm@dws.gov.za](mailto:musaririm@dws.gov.za)**

## DECLARATION OF INTEREST

1. Any legal person, including persons employed by the state<sup>1</sup>, or persons having a kinship with persons employed by the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid (includes an advertised competitive bid, a limited bid, a proposal or written price quotation). In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons employed by the state, or to persons connected with or related to them, it is required that the bidder or his/her authorised representative declare his/her position in relation to the evaluating/adjudicating authority where-
  - the bidder is employed by the state; and/or
  - the legal person on whose behalf the bidding document is signed, has a relationship with persons/a person who are/is involved in the evaluation and or adjudication of the bid(s), or where it is known that such a relationship exists between the person or persons for or on whose behalf the declarant acts and persons who are involved with the evaluation and or adjudication of the bid.
2. **In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.**
  - 2.1 Full Name of bidder or his or her representative: .....
  - Identity Number:.....
  - 2.2 Position occupied in the Company (director, trustee, shareholder<sup>2</sup>, member):  
.....
  - 2.3 Registration number of company, enterprise, close corporation, partnership agreement or trust:  
.....
  - 2.4 Tax Reference Number:.....
  - 2.5 VAT Registration Number: .....
  - 2.6.1 The names of all directors / trustees / shareholders / members, their individual identity numbers, tax reference numbers and, if applicable, employee / PERSAL numbers must be indicated in paragraph 3 below.

<sup>1</sup>"State" means –

- (a) any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No. 1 of 1999);
- (b) any municipality or municipal entity;
- (c) provincial legislature;
- (d) national Assembly or the national Council of provinces; or
- (e) Parliament.

<sup>2</sup>"Shareholder" means a person who owns shares in the company and is actively involved in the management of the enterprise or business and exercises control over the enterprise.

2.7 Are you or any person connected with the bidder presently employed by the state? **YES / NO**

2.7.1 If so, furnish the following particulars:

Name of person / director / trustee / shareholder/ member: .....  
Name of state institution at which you or the person connected to the bidder is employed : .....  
Position occupied in the state institution: .....

Any other particulars:

.....  
.....  
.....

2.7.2 If you are presently employed by the state, did you obtain the appropriate authority to undertake remunerative work outside employment in the public sector? **YES / NO**

2.7.2.1 If yes, did you attach proof of such authority to the bid document? **YES / NO**

(Note: Failure to submit proof of such authority, where applicable, may result in the disqualification of the bid.

2.7.2.2 If no, furnish reasons for non-submission of such proof:

.....  
.....  
.....

2.8 Did you or your spouse, or any of the company's directors / trustees / shareholders / members or their spouses conduct business with the state in the previous twelve months? **YES / NO**

2.8.1 If so, furnish particulars:

.....  
.....  
.....

2.9 Do you, or any person connected with the bidder, have any relationship (family, friend, other) with a person employed by the state and who may be involved with the evaluation and or adjudication of this bid? **YES / NO**

2.9.1 If so, furnish particulars.

.....  
.....  
.....

2.10 Are you, or any person connected with the bidder, aware of any relationship (family, friend, other) between any other bidder and any person employed by the state who may be involved with the evaluation and or adjudication of this bid?

**YES/NO**

2.10.1 If so, furnish particulars.

.....  
 .....  
 .....

2.11 Do you or any of the directors / trustees / shareholders / members of the company have any interest in any other related companies whether or not they are bidding for this contract?

**YES/NO**

2.11.1 If so, furnish particulars:

.....  
 .....  
 .....

**3 Full details of directors / trustees / members / shareholders.**

<b>Full Name</b>	<b>Identity Number</b>	<b>Personal Income Tax Reference Number</b>	<b>State Employee Number / Persal Number</b>

#### 4 DECLARATION

I, THE UNDERSIGNED (NAME).....

CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 2 and 3 ABOVE IS CORRECT. I  
ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME  
SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....  
Signature

.....  
Date

.....  
Position

.....  
Name of bidder

## PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2017

This preference form must form part of all bids invited. It contains general information and serves as a claim form for preference points for Broad-Based Black Economic Empowerment (B-BBEE) Status Level of Contribution

**NB: BEFORE COMPLETING THIS FORM, BIDDERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF B-BBEE, AS PRESCRIBED IN THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017.**

### 1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to all bids:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

1.2

- a) The value of this bid is estimated to **exceed/not exceed** R50 000 000 (all applicable taxes included) and therefore the preference point system shall be applicable; or
- b) Either the 80/20 or 90/10 preference point system will be applicable to this tender (*delete whichever is not applicable for this tender*).

1.3 Points for this bid shall be awarded for:

- (a) Price; and
- (b) B-BBEE Status Level of Contributor.

1.4 The maximum points for this bid are allocated as follows:

	POINTS
<b>PRICE</b>	
<b>B-BBEE STATUS LEVEL OF CONTRIBUTOR</b>	
<b>Total points for Price and B-BBEE must not exceed</b>	

1.5 Failure on the part of a bidder to submit proof of B-BBEE Status level of contributor together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

1.6 The purchaser reserves the right to require of a bidder, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.

## 2. DEFINITIONS

- (a) **“B-BBEE”** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
- (b) **“B-BBEE status level of contributor”** means the B-BBEE status of an entity in terms of a code of good practice on black economic empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
- (c) **“bid”** means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the provision of goods or services, through price quotations, advertised competitive bidding processes or proposals;
- (d) **“Broad-Based Black Economic Empowerment Act”** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (e) **“EME”** means an Exempted Micro Enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;
- (f) **“functionality”** means the ability of a tenderer to provide goods or services in accordance with specifications as set out in the tender documents.
- (g) **“prices”** includes all applicable taxes less all unconditional discounts;
- (h) **“proof of B-BBEE status level of contributor”** means:
- |   |               |
|---|---------------|
| 1)  | B-BBEE Status |
| level certificate issued by an authorized body or person;     |               |
| 2)  | A sworn       |
| affidavit as prescribed by the B-BBEE Codes of Good Practice; |               |
| 3)  | Any other     |
| requirement prescribed in terms of the B-BBEE Act;            |               |
- (i) **“QSE”** means a qualifying small business enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;
- (j) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;

### 3. POINTS AWARDED FOR PRICE

### 3.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

A maximum of 80 or 90 points is allocated for price on the following basis:

$$P_s = 80 \left( 1 - \frac{P_t - P_{\min}}{P_{\min}} \right) \quad \text{or} \quad P_s = 90 \left( 1 - \frac{P_t - P_{\min}}{P_{\min}} \right)$$

Where

Ps = Points scored for price of bid under consideration

$P_t$  = Price of bid under consideration

$P_{min}$  = Price of lowest acceptable bid

#### 4. POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTOR

- 4.1 In terms of Regulation 6 (2) and 7 (2) of the Preferential Procurement Regulations, preference points must be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

B-BBEE Status Level of Contributor	Number of points (90/10 system)	Number of points (80/20 system)
1	10	20
2	9	18
3	6	14
4	5	12
5	4	8
6	3	6
7	2	4
8	1	2
Non-compliant contributor	0	0

#### 5. BID DECLARATION

- 5.1 Bidders who claim points in respect of B-BBEE Status Level of Contribution must complete the following:

#### 6. B-BBEE STATUS LEVEL OF CONTRIBUTOR CLAIMED IN TERMS OF PARAGRAPHS 1.4 AND 4.1

- 6.1 B-BBEE Status Level of Contributor: . = .....(maximum of 10 or 20 points)  
(Points claimed in respect of paragraph 7.1 must be in accordance with the table reflected in paragraph 4.1 and must be substantiated by relevant proof of B-BBEE status level of contributor.)

#### 7. SUB-CONTRACTING

- 7.1 Will any portion of the contract be sub-contracted?

(***Tick applicable box***)

YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
-----	--------------------------	----	--------------------------

- 7.1.1 If yes, indicate:

- i) What percentage of the contract will be subcontracted.....%
- ii) The name of the sub-contractor.....
- iii) The B-BBEE status level of the sub-contractor.....
- iv) Whether the sub-contractor is an EME or QSE

(***Tick applicable box***)

YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
-----	--------------------------	----	--------------------------

- v) Specify, by ticking the appropriate box, if subcontracting with an enterprise in terms of Preferential Procurement Regulations, 2017:

Designated Group: An EME or QSE which is at last 51% owned by:	EME √	QSE √
Black people		
Black people who are youth		
Black people who are women		
Black people with disabilities		
Black people living in rural or underdeveloped areas or townships		
Cooperative owned by black people		
Black people who are military veterans		
<b>OR</b>		
Any EME		
Any QSE		

**8. DECLARATION WITH REGARD TO COMPANY/FIRM**

8.1 Name \_\_\_\_\_ of  
company/firm:.....

8.2 VAT \_\_\_\_\_ registration  
number:.....

8.3 Company \_\_\_\_\_ registration  
number:.....

**8.4 TYPE OF COMPANY/ FIRM**

- ☐ Partnership/Joint Venture / Consortium
- ☐ One person business/sole propriety
- ☐ Close corporation
- ☐ Company
- ☐ (Pty) Limited

[TICK APPLICABLE BOX]

**8.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES**

.....  
.....  
.....  
.....

**8.6 COMPANY CLASSIFICATION**

- ☐ Manufacturer
- ☐ Supplier
- ☐ Professional service provider
- ☐ Other service providers, e.g. transporter, etc.

[TICK APPLICABLE BOX]

8.7 Total number of years the company/firm has been in business:.....

8.8 I/we, the undersigned, who is / are duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the B-BBE status level of contributor indicated in paragraphs 1.4 and 6.1 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I / we acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 6.1, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;
- iv) If the B-BBEE status level of contributor has been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have –
  - (a) disqualify the person from the bidding process;
  - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
  - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
  - (d) recommend that the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted by the National Treasury from obtaining business from any organ of state for a period not exceeding 10 years, after the *audialterampartem* (hear the other side) rule has been applied; and
  - (e) forward the matter for criminal prosecution.

<p>WITNESSES</p> <p>1. ....</p> <p>2. ....</p>
--

<p>.....</p> <p>SIGNATURE(S) OF BIDDERS(S)</p>
<p>DATE: .....</p> <p>ADDRESS .....</p> <p>.....</p> <p>.....</p>

## DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

- 1 This Standard Bidding Document must form part of all bids invited.
- 2 It serves as a declaration to be used by institutions in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.
- 3 The bid of any bidder may be disregarded if that bidder, or any of its directors have-
- a. abused the institution's supply chain management system;
- b. committed fraud or any other improper conduct in relation to such system; or
- c. failed to perform on any previous contract.
- 4 **In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.**

Item	Question	Yes	No
4.1	Is the bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector? <b>(Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer/Authority of the institution that imposed the restriction after the <i>audi alteram partem</i> rule was applied).</b> The Database of Restricted Suppliers now resides on the National Treasury's website( <a href="http://www.treasury.gov.za">www.treasury.gov.za</a> ) and can be accessed by clicking on its link at the bottom of the home page.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.1.1	If so, furnish particulars:		
4.2	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? <b>The Register for Tender Defaulters can be accessed on the National Treasury's website (<a href="http://www.treasury.gov.za">www.treasury.gov.za</a>) by clicking on its link at the bottom of the home page.</b>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.2.1	If so, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court outside of the Republic of South Africa) for fraud or corruption during the past five years?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.3.1	If so, furnish particulars:		
4.4	Was any contract between the bidder and any organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.4.1	If so, furnish particulars:		

**CERTIFICATION**

**I, THE UNDERSIGNED (FULL NAME).....  
CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION  
FORM IS TRUE AND CORRECT.**

**I ACCEPT THAT, IN ADDITION TO CANCELLATION OF A CONTRACT, ACTION  
MAY BE TAKEN AGAINST ME SHOULD THIS DECLARATION PROVE TO BE  
FALSE.**

.....  
**Signature**

.....  
**Date**

.....  
**Position**  
Js365bW

.....  
**Name of Bidder**

## CERTIFICATE OF INDEPENDENT BID DETERMINATION

- 1 This Standard Bidding Document (SBD) must form part of all bids<sup>1</sup> invited.
- 2 Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).<sup>2</sup> Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.
- 3 Treasury Regulation 16A9 prescribes that accounting officers and accounting authorities must take all reasonable steps to prevent abuse of the supply chain management system and authorizes accounting officers and accounting authorities to:
  - a. disregard the bid of any bidder if that bidder, or any of its directors have abused the institution's supply chain management system and or committed fraud or any other improper conduct in relation to such system.
  - b. cancel a contract awarded to a supplier of goods and services if the supplier committed any corrupt or fraudulent act during the bidding process or the execution of that contract.
- 4 This SBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
- 5 In order to give effect to the above, the attached Certificate of Bid Determination (SBD 9) must be completed and submitted with the bid:

<sup>1</sup> Includes price quotations, advertised competitive bids, limited bids and proposals.

<sup>2</sup> Bid rigging (or collusive bidding) occurs when businesses, that would otherwise be expected to compete, secretly conspire to raise prices or lower the quality of goods and / or services for purchasers who wish to acquire goods and / or services through a bidding process. Bid rigging is, therefore, an agreement between competitors not to compete.

### CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

---

(Bid Number and Description)

in response to the invitation for the bid made by:

---

(Name of Institution)

do hereby make the following statements that I certify to be true and complete in every respect:

I certify, on behalf of: \_\_\_\_\_ that:

(Name of Bidder)

1. I have read and I understand the contents of this Certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign the bid, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
  - (a) has been requested to submit a bid in response to this bid invitation;
  - (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
  - (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder
6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium<sup>3</sup> will not be construed as collusive bidding.

7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
- (a) prices;
  - (b) geographical area where product or service will be rendered (market allocation)
  - (c) methods, factors or formulas used to calculate prices;
  - (d) the intention or decision to submit or not to submit, a bid;
  - (e) the submission of a bid which does not meet the specifications and conditions of the bid;
- or
- (f) bidding with the intention not to win the bid.
8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.
9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.

<sup>3</sup> Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

.....  
Signature

.....  
Date

.....  
Position

.....  
Name of Bidder

Js914w 2

# **GOVERNMENT PROCUREMENT GENERAL CONDITIONS OF CONTRACT.**

## **NOTES**

**The purpose of this document is to:**

- (i) Draw special attention to certain general conditions applicable to government bids, contracts and orders; and**
- (ii) To ensure that clients be familiar with regard to the rights and obligations of all parties involved in doing business with government.**

**In this document words in the singular also mean in the plural and vice versa and words in the masculine also mean in the feminine and neuter.**

- ☐ **The General Conditions of Contract will form part of all bid documents and may not be amended.**
- ☐ **Special Conditions of Contract (SCC) relevant to a specific bid, should be compile separately for every bid (if (applicable) and will supplement the General Conditions of Contract. Whenever there is a conflict, the provisions in the SCC shall prevail.**

## **TABLE OF CLAUSES**

- 1. Definitions**
- 2. Application**
- 3. General**
- 4. Standards**
- 5. Use of contract documents and information; inspection**
- 6. Patent rights**
- 7. Performance security**
- 8. Inspections, tests and analysis**
- 9. Packing**
- 10. Delivery and documents**
- 11. Insurance**
- 12. Transportation**
- 13. Incidental services**
- 14. Spare parts**
- 15. Warranty**
- 16. Payment**
- 17. Prices**
- 18. Contract amendments**
- 19. Assignment**
- 20. Subcontracts**
- 21. Delays in the supplier's performance**
- 22. Penalties**
- 23. Termination for default**
- 24. Dumping and countervailing duties**
- 25. Force Majeure**
- 26. Termination for insolvency**
- 27. Settlement of disputes**
- 28. Limitation of liability**
- 29. Governing language**
- 30. Applicable law**
- 31. Notices**
- 32. Taxes and duties**
- 33. National Industrial Participation Programme (NIPP)**
- 34. Prohibition of restrictive practices**
- General Conditions of Contract**

**1. Definitions** 1. The following terms shall be interpreted as indicated:

- 1.1 "Closing time" means the date and hour specified in the bidding documents for the receipt of bids.
- 1.2 "Contract" means the written agreement entered into between the purchaser and the supplier, as recorded in the contract form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
- 1.3 "Contract price" means the price payable to the supplier under the contract for the full and proper performance of his contractual obligations.
- 1.4 "Corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value to influence the action of a public official in the procurement process or in contract execution.
- 1.5 "Countervailing duties" are imposed in cases where an enterprise abroad is subsidized by its government and encouraged to market its products internationally.
- 1.6 "Country of origin" means the place where the goods were mined, grown or produced or from which the services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembly of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.
- 1.7 "Day" means calendar day.
- 1.8 "Delivery" means delivery in compliance of the conditions of the contract or order.
- 1.9 "Delivery ex stock" means immediate delivery directly from stock actually on hand.
- 1.10 "Delivery into consignees store or to his site" means delivered and unloaded in the specified store or depot or on the specified site in compliance with the conditions of the contract or order, the supplier bearing all risks and charges involved until the supplies are so delivered and a valid receipt is obtained.
- 1.11 "Dumping" occurs when a private enterprise abroad market its goods on own initiative in the RSA at lower prices than that of the country of origin and which have the potential to harm the local industries in the RSA.
- 1.12 "Force majeure" means an event beyond the control of the supplier and not involving the supplier's fault or negligence and not foreseeable. Such events may include, but is not restricted to, acts of the purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
- 1.13 "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any bidder, and includes collusive practice among bidders prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the bidder of the benefits of free and open competition.
- 1.14 "GCC" means the General Conditions of Contract.
- 1.15 "Goods" means all of the equipment, machinery, and/or other materials that the supplier is required to supply to the purchaser under the contract.

- 1.16 “Imported content” means that portion of the bidding price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or his subcontractors) and which costs are inclusive of the costs abroad, plus freight and other direct importation costs such as landing costs, dock dues, import duty, sales duty or other similar tax or duty at the South African place of entry as well as transportation and handling charges to the factory in the Republic where the supplies covered by the bid will be manufactured.
- 1.17 “Local content” means that portion of the bidding price which is not included in the imported content provided that local manufacture does take place.
- 1.18 “Manufacture” means the production of products in a factory using labour, materials, components and machinery and includes other related value-adding activities.
- 1.19 “Order” means an official written order issued for the supply of goods or works or the rendering of a service.
- 1.20 “Project site,” where applicable, means the place indicated in bidding documents.
- 1.21 “Purchaser” means the organization purchasing the goods.
- 1.22 “Republic” means the Republic of South Africa.
- 1.23 “SCC” means the Special Conditions of Contract.
- 1.24 “Services” means those functional services ancillary to the supply of the goods, such as transportation and any other incidental services, such as installation, commissioning, provision of technical assistance, training, catering, gardening, security, maintenance and other such obligations of the supplier covered under the contract.
- 1.25 “Written” or “in writing” means handwritten in ink or any form of electronic or mechanical writing.

## **2. Application.**

- 2.1 These general conditions are applicable to all bids, contracts and orders including bids for functional and professional services, sales, hiring, letting and the granting or acquiring of rights, but excluding immovable property, unless otherwise indicated in the bidding documents.
- 2.2 Where applicable, special conditions of contract are also laid down to cover specific supplies, services or works.
- 2.3 Where such special conditions of contract are in conflict with these general conditions, the special conditions shall apply.

## **3. General**

- 3.1 Unless otherwise indicated in the bidding documents, the purchaser shall not be liable for any expense incurred in the preparation and submission of a bid. Where applicable a non-refundable fee for documents may be charged.
- 3.2 With certain exceptions, invitations to bid are only published in the Government Tender Bulletin. The Government Tender Bulletin may be obtained directly from the Government Printer, Private Bag X85, Pretoria 0001, or accessed electronically from [www.treasury.gov.za](http://www.treasury.gov.za)

#### **4. Standards**

- 4.1 The goods supplied shall conform to the standards mentioned in the bidding documents and specifications.

#### **5. Use of contract documents and information; inspection.**

- 5.1 The supplier shall not, without the purchaser's prior written consent, disclose the contract, or any provision thereof, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the purchaser in connection therewith, to any person other than a person employed by the supplier in the performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.
- 5.2 The supplier shall not, without the purchaser's prior written consent, make use of any document or information mentioned in GCC clause 5.1 except for purposes of performing the contract.
- 5.3 Any document, other than the contract itself mentioned in GCC clause 5.1 shall remain the property of the purchaser and shall be returned (all copies) to the purchaser on completion of the supplier's performance under the contract if so required by the purchaser.
- 5.4 The supplier shall permit the purchaser to inspect the supplier's records relating to the performance of the supplier and to have them audited by auditors appointed by the purchaser, if so required by the purchaser.

#### **6. Patent rights.**

- 6.1 The supplier shall indemnify the purchaser against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the goods or any part thereof by the purchaser.

#### **7. Performance security**

- 7.1 Within thirty (30) days of receipt of the notification of contract award, the successful bidder shall furnish to the purchaser the performance security of the amount specified in SCC.
- 7.2 The proceeds of the performance security shall be payable to the purchaser as compensation for any loss resulting from the supplier's failure to complete his obligations under the contract.
- 7.3 The performance security shall be denominated in the currency of the contract or in a freely convertible currency acceptable to the purchaser and shall be in one of the following forms:
- (a) A bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the purchaser's country or abroad, acceptable to the purchaser, in the form provided in the bidding documents or another form acceptable to the purchaser; or
  - (b) A cashier's or certified cheque
- 7.4 The performance security will be discharged by the purchaser and returned to the supplier not later than thirty (30) days following the date of completion of the supplier's performance obligations under the contract, including any warranty obligations, unless otherwise specified in SCC.

## **8. Inspections, tests and analyses**

- 8.1 All pre-bidding testing will be for the account of the bidder 8.2 If it is a bid condition that supplies to be produced or services to be rendered should at any stage during production or execution or on completion be subject to inspection, the premises of the bidder or contractor shall be open, at all reasonable hours, for inspection by a representative of the Department or organization acting on behalf of the Department.
- 8.2 If it is a bid condition that supplies to be produced or services to be rendered should at any stage during production or execution or on completion be subject to inspection, the premises of the bidder or contractor shall be open, at all reasonable hours, for inspection by a representative of the Department or an organization acting on behalf of the Department
- 8.3 If there are no inspection requirements indicated in the bidding documents and no mention is made in the contract, but during the contract period it is decided that inspections shall be carried out, the purchaser shall itself make the necessary arrangements, including payment arrangements with the testing authority concerned.
- 8.4 If the inspections, tests and analyses referred to in clauses 8.2 and 8.3 show the supplies to be in accordance with the contract requirements, the cost of the inspections, tests and analyses shall be defrayed by the purchaser.
- 8.5 Where the supplies or services referred to in clauses 8.2 and 8.3 do not comply with the contract requirements, irrespective of whether such supplies or services are accepted or not, the cost in connection with these inspections, tests or analyses shall be defrayed by the supplier.
- 8.6 Supplies and services which are referred to in clauses 8.2 and 8.3 and which do not comply with the contract requirements may be rejected.
- 8.7 Any contract supplies may on or after delivery be inspected, tested or 8 analyzed and may be rejected if found not to comply with the requirements of the contract. Such rejected supplies shall be held at the cost and risk of the supplier who shall, when called upon, remove them immediately at his own cost and forthwith substitute them with supplies which do comply with the requirements of the contract .Failing such removal the rejected supplies shall be returned at the suppliers cost and risk. Should the supplier fail to provide the substitute supplies forthwith, the purchaser may, without giving the supplier further opportunity to substitute the rejected supplies, purchase such supplies as may be necessary at the expense of the supplier.
- 8.8 The provisions of clauses 8.4 to 8.7 shall not prejudice the right of the purchaser to cancel the contract on account of a breach of the conditions thereof, or to act in terms of Clause 23 of GCC

## **9. Packing**

- 9.1 The supplier shall provide such packing of the goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing, case size and weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.
- 9.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the contract,

including additional requirements, if any, specified in SCC, and in any subsequent instructions ordered by the purchaser.

## **10. Delivery and documents**

10.1 Delivery of the goods shall be made by the supplier in accordance with the terms specified in the contract. The details of shipping and/or other documents to be furnished by the supplier are specified in SCC.

10.2 Documents to be submitted by the supplier are specified in SCC.

## **11. Insurance**

11.1 The goods supplied under the contract shall be fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in the SCC.

## **12. Transportation**

12.1 Should a price other than an all-inclusive delivered price be required, this shall be specified in the SCC.

## **13. Incidental services**

13.1 The supplier may be required to provide any or all of the following services, including additional services, if any, specified in SCC:

- (a) Performance or supervision of on-site assembly and/or commissioning of the supplied goods;
- (b) Furnishing of tools required for assembly and/or maintenance of the supplied goods;
- (c) Furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied goods;
- (d) Performance or supervision or maintenance and/or repair of the supplied goods, for a period of time agreed by the parties, provided that this service shall not relieve the supplier of any warranty obligations under this contract; and

(e) Training of the purchaser's personnel, at the supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied goods.

13.2 Prices charged by the supplier for incidental services, if not included in the contract price for the goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the supplier for similar services.

## **14. Spare parts**

14.1 As specified in SCC, the supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the supplier:

- (a) Such spare parts as the purchaser may elect to purchase from the supplier, provided that this election shall not relieve the supplier of any warranty obligations under the contract; and
- (b) In the event of termination of production of the spare parts:
  - (i) Advance notification to the purchaser of the pending termination, in sufficient time to permit the purchaser to procure needed requirements; and
  - (ii) Following such termination, furnishing at no cost to the purchaser, the blueprints, drawings, and specifications of the spare parts, if requested.

## **15. Warranty**

- 15.1 The supplier warrants that the goods supplied under the contract are new, unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the contract. The supplier further warrants that all goods supplied under this contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the purchaser's specifications) or from any act or omission of the supplier, that may develop under normal use of the supplied goods in the conditions prevailing in the country of final destination.
- 15.2 This warranty shall remain valid for twelve (12) months after the goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the contract, or for eighteen (18) months after the date of shipment from the port or place of loading in the source country, whichever period concludes earlier, unless specified otherwise in SCC.
- 15.3 The purchaser shall promptly notify the supplier in writing of any claims arising under this warranty.
- 15.4 Upon receipt of such notice, the supplier shall, within the period specified in SCC and with all reasonable speed, repair or replace the defective goods or parts thereof, without costs to the purchaser.
- 15.5 If the supplier, having been notified, fails to remedy the defect(s) within the period specified in SCC, the purchaser may proceed to take such remedial action as may be necessary, at the supplier's risk and expense and without prejudice to any other rights which the purchaser may have against the supplier under the contract.

## **16. Payment**

- 16.1 The method and conditions of payment to be made to the supplier under this contract shall be specified in SCC.
- 16.2 The supplier shall furnish the purchaser with an invoice accompanied by a copy of the delivery note and upon fulfilment of other obligations stipulated in the contract.
- 16.3 Payments shall be made promptly by the purchaser, but in no case later than thirty (30) days after submission of an invoice or claim by the supplier.
- 16.4 Payment will be made in Rand unless otherwise stipulated in SCC.

## **17. Prices**

- 17.1 Prices charged by the supplier for goods delivered and services performed under the contract shall not vary from the prices quoted by the supplier in his bid, with the exception of any price adjustments authorized in SCC or in the purchaser's request for bid validity extension, as the case may be.

## **18. Contract amendments**

- 18.1 No variation in or modification of the terms of the contract shall be made except by written amendment signed by the parties concerned.

## **19. Assignment**

- 19.1 The supplier shall not assign, in whole or in part, its obligations to perform under the contract, except with the purchaser's prior written consent.

## **20. Subcontracts**

- 20.1 The supplier shall notify the purchaser in writing of all subcontracts awarded under this contracts if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the supplier from any liability or obligation under the contract.

## **21. Delays in the supplier's performance**

- 21.1 Delivery of the goods and performance of services shall be made by the supplier in accordance with the time schedule prescribed by the purchaser in the contract.
- 21.2 If at any time during performance of the contract, the supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the goods and performance of services, the supplier shall promptly notify the purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the supplier's notice, the purchaser shall evaluate the situation and may at his discretion extend the supplier's time for performance, with or without the imposition of penalties, in which case the extension shall be ratified by the parties by amendment of contract.
- 21.3 No provision in a contract shall be deemed to prohibit the obtaining of supplies or services from a national department, provincial department, or a local authority.
- 21.4 The right is reserved to procure outside of the contract small quantities or to have minor essential services executed if an emergency arises, the supplier's point of supply is not situated at or near the place where the supplies are required, or the supplier's services are not readily available.
- 21.5 Except as provided under GCC Clause 25, a delay by the supplier in the performance of its delivery obligations shall render the supplier liable to the imposition of penalties, pursuant to GCC Clause 22, unless an extension of time is agreed upon pursuant to GCC Clause 21.2 without the application of penalties.
- 21.6 Upon any delay beyond the delivery period in the case of a supplies contract, the purchaser shall, without cancelling the contract, be entitled to purchase supplies of a similar quality and up to the same quantity in substitution of the goods not supplied in conformity with the contract and to return any goods delivered later at the supplier's expense and risk, or to cancel the contract and buy such goods as may be required to complete the contract and without prejudice to his other rights, be entitled to claim damages from the supplier.

## **22. Penalties**

- 22.1 Subject to GCC Clause 25, if the supplier fails to deliver any or all of the goods or to perform the services within the period(s) specified in the contract, the purchaser shall, without prejudice to its other remedies under the contract, deduct from the contract price, as a penalty, a sum calculated on the delivered price of the delayed goods or unperformed services using the current prime interest rate calculated for each day of the delay until actual delivery or performance. The purchaser may also consider termination of the contract pursuant to GCC Clause 23.

## **23. Termination for default**

- 23.1 The purchaser, without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier, may terminate this contract in whole or in part:

- (a) If the supplier fails to deliver any or all of the goods within the period(s) specified in the contract, or within any extension thereof granted by the purchaser pursuant to GCC Clause 21.2;
- (b) If the Supplier fails to perform any other obligation(s) under the contract; or
- (c) If the supplier, in the judgment of the purchaser, has engaged in corrupt or fraudulent practices in competing for or in executing the contract.

23.2 In the event the purchaser terminates the contract in whole or in part, the purchaser may procure, upon such terms deems appropriate, goods, works or services similar to those undelivered, and the supplier shall be liable to the purchaser for any excess costs for such similar goods, works or services. However, the supplier shall continue performance of the contract to the extent not terminated.

23.3 Where the purchaser terminates the contract in whole or in part, the purchaser may decide to impose a restriction penalty on the supplier by prohibiting such supplier from doing business with the public sector for a period not exceeding 10 years.

23.4 If a purchaser intends imposing a restriction on a supplier or any person associated with the supplier, the supplier will be allowed a time period of not more than fourteen (14) days to provide reasons why the envisaged restriction should not be imposed. Should the supplier fail to respond within the stipulated fourteen (14) days the purchaser may regard the intended penalty as not objected against and may impose it on the supplier.

23.5 Any restriction imposed on any person by the Accounting Officer / Authority will, at the discretion of the Accounting Officer / Authority, also be applicable to any other enterprise or any partner, manager, director or other person who wholly or partly

exercises or exercised or may exercise control over the enterprise of the first-mentioned person, and with which enterprise or person the first-mentioned person, is or was in the opinion of the Accounting Officer / Authority actively associated.

23.6 If a restriction is imposed, the purchaser must, within five (5) working days of such imposition, furnish the National Treasury, with the following information:

- (i) The name and address of the supplier and / or person restricted by the purchaser;
- (ii) The date of commencement of the restriction
- (iii) The period of restriction; and
- (iv) The reasons for the restriction.

These details will be loaded in the National Treasury's central database of suppliers or persons prohibited from doing business with the public sector.

23.7 If a court of law convicts a person of an offence as contemplated in sections 12 or 13 of the Prevention and Combating of Corrupt Activities Act, No. 12 of 2004, the court may also rule that such person's name be endorsed on the Register for Tender Defaulters. When a person's name has been endorsed on the Register, the person will be prohibited from doing business with the public sector for a period not less than five years and not more than 10 years. The National Treasury is empowered to determine the period of restriction and each case will be dealt with on its own merits. According to section 32 of the Act the Register must be open to the public. The Register can be perused on the National Treasury website.

## **24. Anti-dumping and countervailing duties and rights**

- 24.1 When, after the date of bid, provisional payments are required, or antidumping or countervailing duties are imposed, or the amount of a provisional payment or anti-dumping or countervailing right is increased in respect of any dumped or subsidized import, the State is not liable for any amount so required or imposed, or for the amount of any such increase. When, after the said date, such a provisional payment is no longer required or any such anti-dumping or countervailing right is abolished, or where the amount of such provisional payment or any such right is reduced, any such favourable difference shall on demand be paid forthwith by the contractor to the State or the State may deduct such amounts from moneys (if any) which may otherwise be due to the contractor in regard to supplies or services which he delivered or rendered, or is to deliver or render in terms of the contract or any other contract or any other amount which may be due to him.

## **25. Force Majeure**

- 25.1 Notwithstanding the provisions of GCC Clauses 22 and 23, the supplier shall not be liable for forfeiture of its performance security, damages, or termination for default if and to the extent that his delay in performance or other failure to perform his obligations under the contract is the result of an event of force majeure.
- 25.2 If a force majeure situation arises, the supplier shall promptly notify the purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the purchaser in writing, the supplier shall continue to perform its obligations under the contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the force majeure event.

## **26. Termination for insolvency**

- 26.1 The purchaser may at any time terminate the contract by giving written notice to the supplier if the supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the supplier, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the purchaser.

## **27. Settlement of Disputes**

- 27.1 If any dispute or difference of any kind whatsoever arises between the purchaser and the supplier in connection with or arising out of the contract, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.
- 27.2 If, after thirty (30) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the purchaser or the supplier may give notice to the other party of his intention to commence with mediation. No mediation in respect of this matter may be commenced unless such notice is given to the other party.
- 27.3 Should it not be possible to settle a dispute by means of mediation, it may be settled in a South African court of law.
- 27.4 Mediation proceedings shall be conducted in accordance with the rules of procedure specified in the SCC.
- 27.5 Notwithstanding any reference to mediation and/or court proceedings herein,
- (a) The parties shall continue to perform their respective obligations under the contract unless they otherwise agree; and

- (b) The purchaser shall pay the supplier any monies due the supplier.

**28. Limitation of liability**

28.1 Except in cases of criminal negligence or wilful misconduct, and in the case of infringement pursuant to Clause 6;

- (a) The supplier shall not be liable to the purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the supplier to pay penalties and/or damages to the purchaser; and
- (b) The aggregate liability of the supplier to the purchaser, whether under the contract, in tort or otherwise, shall not exceed the total contract price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment.

**29. Governing language**

29.1 The contract shall be written in English. All correspondence and other documents pertaining to the contract that exchanged by the parties shall also be written in English.

**30. Applicable law**

30.1 The contract shall be interpreted in accordance with South African laws, unless otherwise specified in SCC.

**31. Notices**

31.1 Every written acceptance of a bid shall be posted to the supplier concerned by registered or certified mail and any other notice to him shall be posted by ordinary mail to the address furnished in his bid or to the address notified later by him in writing and such posting shall be deemed to be proper service of such notice.

31.2 The time mentioned in the contract documents for performing any act after such aforesaid notice has been given, shall be reckoned from the date of posting of such notice.

**32. Taxes and duties**

32.1 A foreign supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the purchaser's country.

32.2 A local supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted goods to the purchaser.

32.3 No contract shall be concluded with any bidder whose tax matters are not in order. Prior to the award of a bid the Department must be in possession of a tax clearance certificate, submitted by the bidder. This certificate must be an original issued by the South African Revenue Services.

**33. National Industrial Participation (NIP) Programme**

33.1 The NIP Programme administered by the Department of Trade and Industry shall be applicable to all contracts that are subject to the NIP obligation

**34. Prohibition of Restrictive practices**

34.1 In terms of section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, an agreement between, or concerted practice by, firms, or a decision by an association of

firms, is prohibited if it is between parties in a horizontal relationship and if a bidder (s) is / are or a contractor(s) was / were involved in collusive bidding (or bid rigging).

- 34.2 If a bidder(s) or contractor(s), based on reasonable grounds or evidence obtained by the purchaser, has / have engaged in the restrictive practice referred to above, the purchaser may refer the matter to the Competition Commission for investigation and possible imposition of administrative penalties as contemplated in the Competition Act No. 89 of 1998.
- 34.3 If a bidder(s) or contractor(s), has / have been found guilty by the Competition Commission of the restrictive practice referred to above, the purchaser may, in addition and without prejudice to any other remedy provided for, invalidate the bid(s) for such item(s) offered, and / or terminate the contract in whole or part, and / or restrict the bidder(s) or contractor(s) from conducting business with the public sector for a period not exceeding ten (10) years and / or claim damages from the bidder(s) or contractor(s) concerned.

Js GCC (revised July 2010)

### 35. SPECIAL CONDITIONS OF CONTRACT

- 35.1 The State reserves the right to verify and authenticate all the information supplied in this document by the bidder.
- 35.2 The Bid must be strictly in accordance with the conditions and specifications contained herein.
- 35.3 If it is found that any information has been tampered with during the evaluation process and/or after the Bid/Contract has been awarded that any false information has been provided, the State reserves the right to take the necessary action as it deems fit, including but not limited to the institution of criminal proceedings.
- 35.4 Failure to sign all relevant places shall invalidate your bid (**SBD1, SBD 3.1, SBD 4, SBD 6.1 or 6.2, SBD 8, SBD 9 and SCC**)
- 35.5 All queries should be sent to the relevant person via email state above. No query will be responded to if sent 3 days before the closing date.
- 35.6 If you are not a registered supplier with the Department of Water and Sanitation, please complete the supplier registration forms and banking details, supplier registration forms are available at Departmental website, [www.dwa.gov.za](http://www.dwa.gov.za)
- 35.7 Bidders/ Individuals that are directors or members in more than one company bidding for this tender and do not openly declare their interests will be disqualified
- 35.8 **Failure to submit original and valid Tax Clearance Certificate shall invalidate your bid.**
- 35.9 The DWS reserves the right to not make an award on any of the responses to this Bid.
- 35.10 The DWS reserves the right to award only parts of this bid and re-bid for other parts.
- 35.11 All bid documents should be hand delivered and deposited in to the Tender Box, if sent via post, envelope or package, the envelope must be clearly marked to avoid your submission been mixed with normal letters sent to the Department.
- 35.12 Only signed, original documents will be accepted.

**36. ACCEPTANCE OF TERMS AND SPECIAL CONDITIONS**

The above terms of the bid and all Annexure have been read, understood and accepted.

For and on behalf of the Bidder:

.....

\_\_\_\_\_  
Signature of Bidder:

\_\_\_\_\_  
Date:

\_\_\_\_\_  
Bidder's Name & Surname:

\_\_\_\_\_  
Designation

\_\_\_\_\_  
Witness Name & Surname:

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature:

\_\_\_\_\_  
Address (Physical):

**TRADING NAME:**\_\_\_\_\_

**CONTACT PERSON:**\_\_\_\_\_

**CONTACT NUMBER:** \_\_\_\_\_

**CLOSING DATE:**\_\_\_\_\_

**This template must be completed by the bidder**

TENDER NUMBER		
SERVICE /PROJECT DESCRIPTION		
NAME OF BIDDER		
TENDER AMOUNT		
BBBEE LEVEL		
<b>COMPANY'S COMPOSITION OF EXISTANCE</b>		
	% OWNERSHIP	TOTAL NUMBER
WOMEN		
PEOPLE WITH DISABILITIES		
BLACK MALES		
YOUTH		
<b>PARTICIPATION IN PROJECT IMPLEMENTATION</b>		
	TOTAL NUMBER	LEVEL OF PARTICIPATION (eg Project Management, Technical, Administrative)
WOMEN		
PEOPLE WITH DISABILITIES		
BLACK MALES		
YOUTH		

*Please note that this information is for reporting purposes only, and will not prejudice the company in anyway nor will it be considered as an evaluation tool.*

Name:.....

Position:.....

Signature:.....Date:.....

**ESTABLISHMENT OF A  
PANEL OF SERVICE  
PROVIDERS SUPPLY AND  
DELIVERY OF CURRENT  
GAUGING EQUIPMENT  
FOR THE MEASUREMENT  
OF VELOCITY AND  
DISCHARGE IN OPEN  
CHANNELS BY USING THE  
ACOUSTIC DOPPLER AND  
TRACER METHODS FOR A  
PERIOD OF 24 MONTHS**

## CONTENTS

<b>1. INSTRUCTIONS TO BIDDERS</b> .....	37
<b>CONTENTS</b> .....	37
<b>INSTRUCTIONS TO BIDDERS</b> .....	38
<b>1. ISSUING OF DOCUMENTS</b> .....	38
<b>2. QUERIES WITH RESPECT TO THIS BID</b> .....	38
<b>3. COMPLETION OF BIDS</b> .....	38
<b>5. SIGNATURE ON BIDS</b> .....	39
<b>6. GENERAL CONDITIONS OF CONTRACT</b> .....	39
<b>7. FORM SBD 1</b> .....	39
<b>8. PREFERENCE FOR EQUITY OWNERSHIP</b> .....	39
<b>9. BIDDERS TO COMPLY WITH DOCUMENTS</b> .....	39
<b>10. TELEGRAPHIC BIDS</b> .....	39
<b>11. THE DEPARTMENTS RIGHT TO DECLINE ANY BID</b> .....	39
The Department does not bind itself to accept the lowest or any bid. ....	39
<b>12. DEPARTMENT NOT LIABLE FOR BIDDER'S EXPENSES</b> .....	39
<b>13. PAYMENTS UNDER THE CONTRACT</b> .....	39
<b>14. EVALUATION CRITERIA</b> .....	40
Phase 1: Mandatory compliance (if not complied with bid will be disqualified) .....	40
Phase 2: Functional / Technical Evaluation .....	40
<b>NOTE: All service providers who meet all the requirements in terms of phase 2 above, will be enlisted to the list of the panel of Service Providers. The service providers as listed on the panel will be approached and submit quotation.</b> .....	40
<b>15. REJECTION OF BID</b> .....	40
<b>16. RESULTS OF BIDS</b> .....	40
<b>DEPARTMENT OF WATER AND SANITATION</b> .....	41
BID W 41	
<b>SECTION 2: CONDITIONS OF CONTRACT</b> .....	41
<b>CONTENTS</b> .....	41
<b>CONDITIONS OF CONTRACT</b> .....	42

## **1. INSTRUCTIONS TO BIDDERS**

### **CONTENTS**

1. Issuing of documents
2. Queries with respect to this bid
3. Completion of Bids
4. Submission of Bids
5. Signature on Bids
6. General Conditions of Contract
7. Form SBD 1
8. Preference Points
9. Bids to comply with documents
10. Telegraphic bids
11. The Department's right to decline any bid
12. Department is not liable for bidder's expenses
13. Payments made under this contract
14. Evaluation Criteria
15. Rejection of bids
16. Results of bids

## **INSTRUCTIONS TO BIDDERS**

### **1. ISSUING OF DOCUMENTS**

- (a) **A complete set of bid documents are issued to a prospective Bidder. These documents are obtainable at**
- (b) Bidders must satisfy themselves that the document is complete and conform to the index of this document. Should any figures or writing be indistinct or should any pages be missing from this document or should this document or the drawing(s) contain any obvious errors, the Bidders must immediately notify the Department in order to have any discrepancy rectified or clarified before submitting his bid. Such clarification will be valid only if made by the Department by means of formal amendment as described hereunder prior to the date of submission of bids. The Department may issue amendments to clarify or modify the Bid Documents. A copy of each amendment will be issued to each bidder and shall be acknowledged on the form issued with the amendments. No claim whatsoever will be entertained for faults in the bid price resulting from the above-mentioned discrepancies.
- (c) No alterations, omissions or additions shall be made to this document, but should it be deemed necessary to do so, the Bidder is at liberty to qualify his bid.
- (d) All Bidders shall be deemed to have waived, renounced and abandoned any conditions printed or written upon any stationery used by them for the purpose of or in connection with the submission of bids which are in conflict with the conditions laid down in this document.

### **2. QUERIES WITH RESPECT TO THIS BID**

Queries of a specific technical nature may be discussed personally or telephonically with Chris Lloyd telephone 051 405 9248

### **3. COMPLETION OF BIDS**

- (a) The bid must be signed on the Invitation to Bid form (SBD 1) annexed hereto with all blanks in the bid and the appendix filled in.
- (b) All spaces in the bid forms and other annexures shall be completed in full.
- (c) The Technical Schedule contained in the bid document and the Pricing Schedule must be fully completed and priced out by the bidder. Failure to do so will deem your bid invalid.
- (d) The bid documents shall not be separated in any way nor must any pages be detached from the original documents.

### **4. SUBMISSION OF BIDS**

- (a) The original Bid, together with a covering letter and supporting documents, shall be sealed in an envelope endorsed:

**"ORIGINAL BID FOR ESTABLISHMENT OF A PANEL OF SERVICE PROVIDERS FOR SUPPLY AND DELIVERY OF CURRENT GAUGING EQUIPMENT FOR THE MEASUREMENT OF VELOCITY AND DISCHARGE IN OPEN CHANNELS BY USING THE ACOUSTIC DOPPLER AND TRACER METHODS FOR A PERIOD OF 24 MONTHS**

and the name of the Bidder shall be clearly shown.

- (b) Bids endorsed as above, will be received by: The Supply Chain Management Office or may be deposit in the bid box at the entrance of the Department Of Water and Sanitation, Zwamadaka Building not later than 11:00 on the date stipulated on the front cover of this document.

## **5. SIGNATURE ON BIDS**

The Bid, if by an individual, must be signed by that individual or by someone on his behalf duly authorised thereto and proof of such authority must be produced. If the bid is by a Company it must be signed by a person duly authorised thereto by a Resolution of a Board of Directors a copy of which Resolution, duly certified by the Chairman of the Company is to be submitted with the bid.

If the bid is submitted by joint venture of more than one person and/or Companies and/or firms it shall be accompanied by the following:

- (a) The original or a naturally certified copy of the original document under which such joint venture was constituted which must define precisely inter alia the conditions under which the joint venture will function, its period of duration and the participation of the several constituent persons and/or companies and/or firms.
- (b) A certificate signed by or on behalf of each participating person and/or company and/or firm authorising the person who signed the bid to do so.

## **6. GENERAL CONDITIONS OF CONTRACT**

The General Conditions of Contract shall be regarded as an integral part of the contract documents.

## **7. FORM SBD 1**

The copy of Form SBD 1 (Invitation to Bid), annexed to these documents, must be completed and signed by the Bidder. Failure to do so will deem your bid invalid.

## **8. PREFERENCE FOR EQUITY OWNERSHIP**

Bidder desirous of claiming preference for equity ownership by previously disadvantaged individuals/women must fully complete and sign the Preference Certificate, Form SBD 6.1 or no preference will be allowed. A copy of your company registration forms and a valid accredited B-BBEE Status Level Verification Certificate **must** be submitted with the bid document.

## **9. BIDDERS TO COMPLY WITH DOCUMENTS**

Where applicable, Bidders must allow in their Bids for all labour, material, machinery and everything necessary for the execution and completion of the Contract in accordance with the bid documents. No alterations may be made in the Invitation to Bid, Schedule of Quantities or other documents and the bid will be deemed to comply entirely with the terms of the documents.

## **10. TELEGRAPHIC BIDS**

No bid forwarded by telegram, telex, facsimile, e-mail or similar apparatus will be considered.

## **11. THE DEPARTMENTS RIGHT TO DECLINE ANY BID**

The Department does not bind itself to accept the lowest or any bid.

## **12. DEPARTMENT NOT LIABLE FOR BIDDER'S EXPENSES**

The Department will not be held liable for any expenses incurred in preparing and submitting bids.

## **13. PAYMENTS UNDER THE CONTRACT**

All payments due to the Contractor in terms of the contract will be done by means of Electronic Fund Transfer.

#### 14. EVALUATION CRITERIA

The Department of Water and Sanitation will evaluate all proposals in terms of the Preferential Procurement Regulations 2017. A copy of the Preferential Procurement Regulations 2017 can be downloaded from [www.treasury.gov.za](http://www.treasury.gov.za). A two phase evaluation criteria will be considered in evaluating the bid.

- 1. Phase 1: Mandatory compliance (if not complied with bid will be disqualified)**
- 2. Phase 2: Functional / Technical Evaluation**

##### **Phase 1**

##### **Mandatory compliance (if not complied with bid will be disqualified)**

Bidders are required to submit the following documents which should form part of the bid submitted by closing date. Omission to submit the listed documents will render your bid non responsive and the bid will not be considered for the phase 2 evaluation.

- (a) Pre-qualification in terms of Preferential Procurement Regulation, 2017, the bidding company must be 51% black owned, minimum level 2 Exempted Micro Enterprise (EME). Bidders are required to submit certified and valid copy of BEE certificate and CIPC documentation.
- (b) Attendance of Compulsory Briefing Session
- (c) Appointment letter OR Certificate from the Manufacturer as Distributor/ Authorised Agent of the instrumentation in South Africa.
- (d) Warranty certificate for 12 months

##### **Phase 2**

##### **Technical Evaluation:**

The bid will be evaluated using the below criteria and failure to comply with **all** the specifications as listed will render your bid as not to specification and non-responsive.

- (a) Standard Specifications as set out under Section 3: Specifications and the compliance thereof
- (b) The bid will be rendered non-responsive if the bidder fails to complete the "Comply / Not Comply" section in the specification under Section 3: Specifications

**NOTE: All service providers who meet all the requirements in terms of phase 2 above, will be enlisted to the list of the panel of Service Providers. The service providers as listed on the panel will be approached and submit quotation.**

#### 15. REJECTION OF BID

Bids not complying with the above-mentioned requirements and specifications may be regarded as incomplete and may not be considered. Any document submitted will be subjected to verification.

#### 16. RESULTS OF BIDS

Results of non-acceptance of bids will be sent to individual unsuccessful bidders

## **DEPARTMENT OF WATER AND SANITATION**

### **BID W**

#### **SECTION 2:            CONDITIONS OF CONTRACT**

#### **CONTENTS**

- A.      GENERAL CONDITIONS OF CONTRACT
- B.      SPECIAL CONDITIONS OF CONTRACT

#### **NOTE:**

**Failure to indicate whether you comply or not comply under the “Comply/Not Comply” column in the Specification will invalidate the bid. (\*Clearly delete/cross-out whichever is not applicable.)**

## CONDITIONS OF CONTRACT

### A. GENERAL CONDITIONS OF CONTRACT

The Contract shall be governed by: "General Conditions of Contract", which is attached to this bid document.

The only variations from these General Conditions of Contract shall be given in the Special conditions of Contract below.

### B. SPECIAL CONDITIONS OF CONTRACT

**This section must be completed in full failure to do so may invalidate your bid**

**\*Delete which are not applicable**

1. Is the offer strictly in accordance with the conditions and specifications? \*YES / NO

If not in accordance with the specification, furnish the deviations. \_\_\_\_\_

2. Period required for commencement with service after receipt of order. \_\_\_\_\_

3. Are you registered in terms of section 23(1) or 23(3) of the value Added Tax Act, 1991 (Act no 89 of 1991)? \*YES / NO

If so, state your VAT registration number. \_\_\_\_\_

4. Is the bid price firm for the duration of the contract period? \*YES / NO

5. **The DEPARTMENT OF WATER AND SANITATION will not entertain any claims for non-firm price increases claimed at a later state. No exception will be made in this regard.** **TAKE NOTE**

6. It is a specific condition of this contract with DWS ,that consultants awarded this contract undertake not to divulge to others, or use for their own benefit, confidential information gained during the course of the work.  
In terms of section 21(2) of the Copyright act (Act no.98 of 1978) ("the Act ") the copyright regarding a work that is made under the direction or control of the State is owned by the state. Section 2(1) of the Act provides that the term "works", if they are original, include literary works, musical works artistic works, cinematograph films, sound recordings, broadcasts, programme-carrying signals, published editions and computer programs.

## DEPARTMENT OF WATER AND SANITATION

### BID W

ESTABLISHMENT OF A PANEL OF SERVICE PROVIDERS FOR SUPPLY AND DELIVERY OF CURRENT GAUGING EQUIPMENT FOR THE MEASUREMENT OF VELOCITY AND DISCHARGE IN OPEN CHANNELS BY USING THE ACOUSTIC DOPPLER AND TRACER METHODS FOR A PERIOD OF 24 MONTHS

#### SECTION 3 (A) GENERAL REQUIREMENTS

1. Scope
2. Standards and Specifications
3. Departures from the services rendered
4. Testing of equipment
5. Installation
6. Transport
7. Maintenance and Spares
8. Manuals and Training
9. Technical Schedules
10. General Technical Requirements

#### *SECTION 3 (B) ACOUSTIC DOPPLER CURRENT PROFILERS*

1. Scope
2. Handheld Acoustic Doppler Instrument 1
3. Handheld Acoustic Doppler Instrument 2
4. Acoustic Doppler Current Profiler 1
5. Acoustic Doppler Current Profiler 2
6. Acoustic Doppler Current Profiler 3

#### SECTION 3 (C)

#### FLOW GAUGING BY DILUTION OF CHEMICALS

1. Scope
2. Tracer Flow Meter 1
3. Tracer Flow Meter 2



## SECTION 3 (A)

### GENERAL REQUIREMENTS

#### 1. SCOPE:

This contract makes provision for the supply and delivery of current gauging equipment for the Directorate Hydrological Services of the Department of Water and Sanitation. The equipment will be used to do current gauging in canals and rivers, situated throughout the country. The equipment will mainly be utilised in using the Acoustic Doppler and Dilution methods.

1.1. This part of the specification covers the detail hardware requirements for the current gauging equipment.

1.2. The equipment shall be designed to have an operating life in excess of 5 years.

1.3. The equipment required includes the following:

##### 1.3.1. Acoustic Doppler Current Profilers:

- Handheld Acoustic Doppler Instrument for use in laboratories, small streams and canals.
- Acoustic Doppler Current Profiler, stationary / section-by-section method only, for use in medium to large streams / rivers.
- Acoustic Doppler Current Profiler, with bottom tracking but without GPS, for use in small to medium streams / rivers.
- Acoustic Doppler Current Profiler, with bottom tracking and GPS, for use in medium to large streams / rivers.

##### 1.3.2. Flow Gauging by Dilution of Chemicals:

- Tracer Method

***No guarantee can be given to the Bidder with regard to the quantity of each item required. Assembly & Operation assistance, maintenance and back-up facilities shall be provided by the Contractor.***

#### 2. STANDARDS AND SPECIFICATIONS:

2.1. The offered equipment with regard to its operational performance is to be in strict accordance with each and every term of the documents listed below:

2.1.1. The information provided in the Technical Schedules - Section 4.

2.2. Next to each detail specification a block is provided for the Bidder to complete the following:

2.2.1. Offered equipment / item to specification - or ☐ **Y**

2.2.2. Offered equipment / item not to specification -or ☐ **N**  
(Refer to Paragraph 3, below.)

2.2.3. The bidder must initialise each page, he/she has filled and completed



#### 3. DEPARTURES FROM THE SERVICES TO BE RENDERED:

3.1. If, in their offers to meet these specifications, there are any departures whatsoever from any of the provisions, or from any of the terms set out in paragraph 2 (Standards and Specifications), then Bidders shall list each and every departure in Section 1. (Annexure

A). The list, which shall accompany the tender offer, shall be so numbered as to correlate each departure from the relative paragraph contained in the documents listed at 2.1.,above.

- 3.2. Failure on the part of any Bidder to meet this requirement in full shall signify compliance with the terms and conditions of the contract.**

**4. TESTING OF EQUIPMENT:**

- 4.1.** It is a condition of this tender that, on request of the Engineer, the Bidder shall be able to demonstrate, within 6 (six) weeks, after the closure of the tender, all current gauging units and systems to the Engineer, before the tender shall be awarded. On request of the Engineer, the Bidder shall assemble complete current gauging equipment systems at the Hydrological Services Testing and Training Facility at Boskop Dam (Potchefstroom) or a site identified by the Engineer, for evaluation of the equipment's performance. This request will be submitted by the Engineer within 3 (three) weeks after the closing date of this tender. The bid will be awarded after the Engineer is fully satisfied with the testing results performed at the testing facility / Site.

**Failure to comply with these requests will invalidate the tender offer.**

- 4.2.** All the equipment required in terms of this contract shall be set up and tested by the Contractor at his workshop in South Africa prior to inspection and testing by the Engineer, before any of the equipment is delivered to any of the Employer's stores.
- 4.3.** Any faults, deviations, etc. discovered during the inspection at the workshop shall be rectified fully before the equipment is delivered to the Employer's stores.

**5. ASSEMBLY AND OPERATION OF EQUIPMENT:**

- 5.1.** The equipment shall be designed to allow assembly and operation by relatively unskilled staff. No special precautions shall be applicable and connectors shall be so configured that damage will not result should devices or connectors be swapped around.
- 5.2.** It is a condition of this contract that the Contractor shall assist the Department where necessary with the initial assembly and operation of the equipment in order to ensure proper operation thereof. Assembly procedures shall be incorporated in the user manual and information for the proper assembly shall be given. This cost will be borne by the Contractor.

**6. TRANSPORT:**

- 6.1.** The equipment shall be designed and packed to withstand transport by vehicle over rough, unmade dusty roads.

**7. MAINTENANCE AND SPARES:**

- 7.1.** The Contractor shall be able to maintain and guarantee all the equipment supplied for a **minimum period of one year**, starting from the date of delivery.
- 7.2.** The Contractor shall provide the equipment listed in the various parts of the specifications and he shall during the maintenance period be obliged to maintain the spares in proper working condition and any failed equipment shall be repaired promptly.
- 7.3.** The Contractor shall, at all times, have available, two complete sets of spare equipment so that the Employer will be in a position to repair any part of the equipment by way of substitution. Any faulty equipment will be replaced on site with a spare unit and the faulty unit will be transported to the Contractor's workshops for repair. All transport/courier/shipping costs, during the initial guarantee period, will be borne by the Contractor.

Should it be deemed necessary by the Engineer that the Contractor needs to visit a

particular site, during the first year (12 Months), for a particular problem; the cost will be borne by the Contractor,

- 7.4. All equipment shall be designed to require a minimum of maintenance. Routine maintenance inspections shall be limited to the physical cleaning of the equipment.

## 8. MANUALS AND TRAINING:

- 8.1. The Contractor shall provide complete sets of user manuals, in English, for each system and sub-system to be provided in terms of this contract. ***The user manual shall include the following:***

- Equipment specifications;
- Assembly and operation details;
- Wiring diagrams;
- Troubleshooting;
- Explanation of error codes and possible remedial action; where necessary;
- Maintenance;
- Follow up on job training.

- 8.2. In terms of paragraph 13 in Section 3 (Page 64), the Bidder shall be required to provide the following training, should it be deemed necessary by the Employer:

8.2.1. Training of technical staff will be presented at two venues in South Africa, as identified by the Engineer. All costs for these training sessions, i.e. Travelling, Accommodation and Meals etc. will be borne by the Bidder.

8.2.2 A course in the installation of the equipment, first line maintenance, faultfinding and operator's procedures, is required and this will be attended by a maximum of 25 people per venue.

8.2.3 Follow up on job training as per the request of the Technical Officials

## 9. TECHNICAL SCHEDULE:

Bidders are advised that it is in their own interest to provide accurate and detailed information in answer to all the questions asked in the Technical Schedules, which appear in Section 4 of this specification.

**Failure to comply with this request will invalidate the tender offer.**

## 10. GENERAL TECHNICAL AND OTHER REQUIREMENTS:

10.1. All submersible instrumentation shall function reliably in water with a high saline content as well as a high silt content, including various chemical pollutants (including sulphates and phosphates) originating from agricultural run-off and other human sources.

10.2. Only high quality equipment capable of offering extended service under arduous conditions shall be offered.

10.3. All instrumentation shall fully comply or exceed the specifications laid down in this Section. No deviation from the specified standards will be accepted.

10.4. Only microprocessor-controlled, frequency-synthesis instrumentation incorporating the latest in surface-mount technology shall be acceptable.

10.5. Bidders shall not offer instrumentation that has been superseded by later models or that will be discontinued in the near future, within the contract period. All instrumentation offered shall be of the most recent design. Should the Bidder be aware of any impending modifications or new equipment he / she shall state the expected implications of such in his / her offer.

10.6. All equipment offered shall have a high reliability and shall have a proven record (case history) of usage in the field of Hydrometry/ Hydrological measurement.

10.7. Labels:

The instrumentation shall have durable, clearly-legible labels, indicating the make, model, serial number, ratings and other relevant information.

- 10.8. Mounting Brackets:**  
All mounting brackets for the instrumentation, where applicable, need to be robust and be insensitive to impact and vibration. Where possible, it should be manufactured from corrosion-resistant material, preferably stainless steel, or the equivalent thereof.
- 10.9.** Various makes, models, manufacturers' equipment will be used and therefore the contractor will at all times make the offered equipment's protocol available to the Engineer for the compatibility to other equipment offered on this contract.
- 10.10.** All instrument software updates, where applicable, will be supplied free of charge during the contract period. These upgrades will be delivered / sent / emailed by the contractor to the relevant offices, which make use of the contractor's equipment.
- 10.11.** Should the Bidder or Manufacturing Company do any additional development during the contract period, on any item awarded to him / her, the Bidder will inform the Engineer in writing of such action. The Bidder will also outline what the effect it will have on the current contract and/or equipment.
- 10.12.** Should a newly developed model of any of the offered equipment be introduced into the open market, the Bidder can supply such equipment on the following conditions:
- 10.12.1. The Engineer will be informed in writing and only after the equipment has been tested and satisfying results have been obtained, the Engineer can approve such action.
- 10.12.2. Back up, Maintenance and spares on the existing equipment will still be made available by the Bidder, at no additional cost.
- 10.12.3. The client will still have the option to purchase the older model.
- 10.12.4. The newly developed item will be offered at no additional cost.

**The specification questionnaire below is the 2nd phase evaluation of the proposals to be in compliance with the specification.**

Next to each detail specification (Section 3) a block is provided for the Bidder to complete the following:

Offered equipment / item to specification	-	<input type="checkbox"/> <b>Y</b>	or	<input checked="" type="checkbox"/>
Offered equipment / item not to specification (Refer to Paragraph 3, below.)	-	<input type="checkbox"/> <b>N</b>	or	<input checked="" type="checkbox"/> <b>X</b>

The bidder must initialise each page, he/she has filled and completed

**Suppliers are required to indicate accordingly. Failure to indicate such will result in your bid being disqualified.**

## SECTION 3(B)

### ACOUSTIC DOPPLER CURRENT PROFILERS

#### 1. SCOPE:

Acoustic Doppler Technology has been used for many years, primarily in the study of ocean currents and estuaries. It is lately being used for the measurement of stream flow, especially in larger rivers, where conventional discharge measurement techniques are either very expensive, labour intensive or impossible.

This section of the detail specifications is for various types / systems of Acoustic Doppler Instrumentation for the measurement of open channel discharge, and is divided into the following categories:

- 1.1. Handheld Acoustic Doppler Instrument for use in laboratories, small streams and canals.
- 1.2. Acoustic Doppler Current Profiler 1, stationary / section-by-section method only, for use in medium to large streams/rivers.
- 1.3. Acoustic Doppler Current Profiler 2, with bottom tracking but without GPS, for use in small to medium streams/rivers.
- 1.4. Acoustic Doppler Current Profiler 3, with bottom tracking and GPS, for use in medium to large streams/rivers.

#### 2. HANDHELD ACOUSTIC DOPPLER INSTRUMENT 1:

##### 2.1. Application:

This instrument will make use of the Acoustic Doppler principle and will mainly be utilised for high accuracy velocity measurements in laboratories, small natural streams and small to medium canals.

Normal conventional procedures will be followed with the physical measurement, namely the wading method.

##### 2.2. Design and technical details:

###### 2.2.1. Current meter / Sensor / Probe:

- The instrument body must be robust, corrosion resistant and insensitive to vibration. ☐
- The instrument should be capable of measuring discharge accurately in water depths of 2.5 cm. ☐
- The standard offered instrument should measure two dimensional flow but a three dimensional probe/sensor should be included in the offer. ☐
- The following measurement accuracies will apply:
  - Velocity measurement range of 0.002 m/s to 3 m/s. ☐
  - Velocity resolution of not less than 0.001 m/s. ☐
  - Velocity accuracy of  $\pm 2\%$  of measured velocity. ☐
- The instrument should preferably not exceed the following dimensions and weight: Total probe width of 150 mm and 3 kg. ☐
- The instrument should be able to operate within the following environmental conditions: - 5°C to 45°C ☐

- The instrument/probe should include a flexible cable, not less than 2 m in length, and should include a standard RS 232/USB converter supplied interface for using with a hand-held unit or a PC / Laptop. ☐

### **2.2.2. Hand-held Interface / Counter Unit:**

- The unit housing should be robust, corrosion resistant, UV protected, water-proof and insensitive to vibration. ☐
- The unit should include a clearly visible backlit LC Display, simple membrane type key-pad interface and RS 232/USB communication interface. ☐
- The unit should be able to display the measured point velocity in real-time. ☐
- The internal memory should be of adequate size so that approximately 50 discharge measurements could be saved. ☐
- The unit should work adequately for at least 20 hours on standard size commercially available dry cell batteries. ☐
- The memory should be of the non-volatile type so that data is not lost, should the batteries become flat. ☐
- A Software package for the automatic computation of discharge measurements, according to the relevant ISO & WMO standards, should be included within the unit. ☐
- The following minimum parameters should be displayed and printed in a spreadsheet format: ☐
  - File Name / Station Name / Station Number
  - Averaging Time
  - Staff Gauge Height / Gauge Plate reading
  - Total Width
  - Total Area
  - Total Discharge
  - Average / Mean Velocity
  - Table showing all the observed data, ie.: Number, Distance, Depth, Velocity, etc. ☐

### **2.2.3. Accessories:**

- The instrument / sensor must be able to be supported on a non-corrosive rod. ☐
- The rod should have clearly marked cm graduations on it. ☐
- The appropriate data transfer cable for extracting data from the hand-held unit / counter unit to another PC or Laptop, should be included in the offer. ☐
- The appropriate tools to service and connect the equipment should be included in the offer. ☐
- All equipment should be packed in suitable robust instrument carry case/s. ☐
- A list of general spares / Services that are available on this instrument (wading rod adaptors, rods, carry case, etc.) will be listed and priced in the Price Schedules – “Spares”. ☐

### 3. HANDHELD ACOUSTIC DOPPLER INSTRUMENT 2:

#### 3.1. Application:

This instrument will make use of the Acoustic Doppler principle and will mainly be utilised for high accuracy velocity measurements in laboratories, small natural streams and small to medium canals.

Normal conventional procedures will be followed with the physical measurement, namely the wading method.

#### 3.2 Design and technical details:

##### 3.2.1. *Current meter / Sensor / Probe:*

- The instrument / sensor must be able to be supported on a 20mm diameter, non-corrosive rod. ☐
- The rod should have clearly marked cm graduations on it. ☐
- The instrument body must be robust, corrosion resistant and insensitive to vibration. ☐
- The instrument should be capable of measuring discharge accurately in water depths of 2.5 cm. ☐
- The standard offered instrument should measure two dimensional flow but a three dimensional probe/sensor should be included in the offer. ☐
- The following measurement accuracies will apply:
  - Velocity measurement range of 0.002 m/s to 3 m/s. ☐
  - Velocity resolution of not less than 0.001 m/s. ☐
  - Velocity accuracy of  $\pm 2\%$  of measured velocity. ☐
- The instrument should preferably not exceed the following dimensions and weight: Total probe width of 150 mm and 3 kg. ☐
- The instrument should be able to operate within the following environmental conditions: - 5°C to 45°C ☐
- The instrument/probe should include a flexible cable, not less than 2 m in length, and should include a standard RS 232/USB converter supplied interface for using with a hand-held unit or a PC / Laptop. ☐

##### 3.2.2. *Hand-held Interface / Counter Unit:*

- The unit housing should be robust, corrosion resistant, UV protected, water-proof and insensitive to vibration. ☐
- The unit should include a clearly visible backlit LC Display, simple membrane type key-pad interface and RS 232/USB communication interface. ☐
- The unit should be able to display the measured point velocity in real-time. ☐
- The internal memory should be of adequate size so that approximately 50 discharge measurements could be saved. ☐
- The unit should work adequately for at least 20 hours on standard size commercially available dry cell batteries. ☐

- The memory should be of the non-volatile type so that data is not lost, should the batteries become flat. ☐
- A Software package for the automatic computation of discharge measurements, according to the relevant ISO & WMO standards, should be included within the unit. ☐
- The following minimum parameters should be displayed and printed in a spread sheet format: ☐
  - File Name / Station Name / Station Number
  - Averaging Time
  - Staff Gauge Height / Gauge Plate reading
  - Total Width
  - Total Area
  - Total Discharge
  - Average / Mean Velocity
  - Table showing all the observed data, ie.: Number, Distance, Depth, Velocity, etc.

### **3.2.3 Accessories:**

- The appropriate data transfer cable for extracting data from the hand-held unit / counter unit to another PC or Laptop, should be included in the offer. ☐
- The appropriate tools to service and connect the equipment should be included in the offer. ☐
- All equipment should be packed in suitable robust instrument carry case/s. ☐
- A list of general spares / Services that are available on this instrument (wading rod adaptors, rods, carry case, etc.) will be listed and priced in the Price Schedules – “Spares”. ☐

## **4. ACOUSTIC DOPPLER CURRENT PROFILER 1:**

### **4.1. Application:**

This instrument will also make use of the Acoustic Doppler principle and will mainly be utilised in medium to large streams / rivers.

Normal conventional procedures will be followed with the physical measurement by measuring the vertical velocity profile and the depth in user-selectable number of sections, commonly known as verticals, across the width of the stream or river.

No bottom tracking and GPS data to calculate discharge need to be performed by this instrument.

### **4.2. Design and technical details:**

***The complete system should consist of the following:***

- Carrying Vessel, ie. Small Boat;
- Acoustic Doppler Current Profiler;
- Power Supply;
- Communication System;
- Data Receiver; and
- Application Software.

***The following specifications will apply:***

**4.2.1. Carrying Vessel:**

- The vessel must be robust, corrosion resistant, stream lined and the hull design should preferably be of the Catamaran or Tri-maran type. ☐
- The vessel shall be designed and be tested to be stable in rough water conditions and currents of up to 4 m/s. ☐
- The vessel should preferably not exceed the following dimensions and weight:  
1 000 mm long x 500 mm wide and 15 kg (boat alone). ☐
- The profiler shall be fitted to the vessel in such a manner that minimum damage to the profiler could be caused by any floating debris. ☐
- The power supply and communication system shall be built into a compartment on/in the vessel and should be watertight. ☐

**4.2.2. Acoustic Doppler Current Profiler:**

- The instrument body must be robust, corrosion resistant, water tight and insensitive to vibration. ☐
- The instrument must be capable of measuring discharge accurately in water depths from at least 0.4 m to 10 m. ☐
- The profiler should have a minimum of three transducer beams, in one plane, operating at approximately 2 MHz. ☐
- The following measurement accuracies will apply:
  - Velocity measurement range of at least 5 m/s. ☐
  - Velocity accuracy of  $\pm 2\%$  of measured velocity. ☐
  - The current should be measured in depth cells of a minimum of 20 cm. ☐
  - The minimum blanking distance should be 10 cm. ☐
- The instrument should be able to operate within the following environmental conditions: 0°C to 35°C ☐
- The instrument should have a built-in temperature sensor, which can measure between -2°C to 30°C with an accuracy of 0.5°C or better. ☐
- The profiler shall have an internal memory capacity of at least 4 MB. ☐

**4.2.3. Power Supply:**

- The power supply for the profiler and communication system should be commercially available dry cell battery / batteries or rechargeable sealed lead-acid battery / batteries. ☐
- The power switch to power up the complete system should be placed on the boat in such a manner that it has easy access to the operator – no unscrewing of lids, etc. ☐

- The communications antenna should also be fitted on or in the boat to minimise any damage by floating debris.

#### **4.2.4. Communication:**

- Communication between the profiler and a hand-held unit shall preferably be via two-way radio telemetry or blue tooth technology. ☐
- The transceiver and / or the handheld unit shall preferably be powered by its own power supply. ☐

#### **4.2.5. Data Receiver:**

- The data receiver unit housing should be robust, corrosion resistant, UV protected, splash-proof and insensitive to vibration. ☐
- The unit should include a clearly visible backlit LC Display, simple membrane type key-pad interface or touch screen interface as well as a RS 232 communication interface. ☐
- A Software package for the automatic computation of discharge measurements, according to the relevant ISO & WMO standards, should be included within the hand-held unit and will be user friendly. ☐
- The unit should control the total gauging process and give the operator understandable instructions how to do the measurements. ☐
- The unit should be able to display the total discharge after the gauging is completed. ☐
- The hand-held unit should work adequately for at least 10 hours continuously on standard size commercially available dry cell batteries. ☐
- The memory should be of the non-volatile type so that data is not lost should the batteries become flat. ☐
- The gauging parameters, calculations, illustrations, tables, etc. should be able to be transferred to a PC / Laptop via a standard RS 232 port, IRDA or blue tooth technology. ☐

#### **4.2.6. Accessories:**

- The appropriate data transfer cable for extracting data from the hand-held unit to another PC or Laptop, should be included in the offer. ☐
- The appropriate tools to service and connect the equipment should be included in the offer. ☐
- All equipment should be packed in suitable robust instrument carry case/s. ☐
- A list of general spares / Services that are available on this instrument will be listed and priced in the Price Schedules – “Spares”. ☐

## **5. ACOUSTIC DOPPLER CURRENT PROFILER 2:**

### **5.1. Application:**

This instrument will also make use of the Acoustic Doppler principle and will mainly be utilised in small to medium streams / rivers and bottom tracking should be performed by this instrument.

## 5.2. Design and technical details:

### ***The complete system should consist of the following:***

- Carrying Vessel, ie. Small Boat;
- Acoustic Doppler Current Profiler with bottom tracking;
- Power Supply;
- Communication System;
- Data Receiver; and
- Application Software.

### ***The following specifications will apply:***

#### **5.2.1. Carrying Vessel:**

- The vessel must be robust, corrosion resistant, stream lined and the hull design should preferably be of the Catamaran or Tri-maran type. ☐
- The vessel shall be designed and be tested to be stable in rough water conditions and currents of up to 2 m/s. ☐
- The vessel should preferably not exceed the following dimensions and weight:  
500 mm long x 350 mm wide and 5 kg (boat alone). ☐
- The profiler shall be fitted to the boat in such a manner that minimum damage to the profiler could be caused by any floating debris. ☐
- The power supply and communication system shall be built into a compartment on/in the vessel and should be watertight. ☐

#### **5.2.2. Acoustic Doppler Current Profiler:**

- The instrument body must be robust, corrosion resistant, water tight and insensitive to vibration. ☐
- The instrument should include bottom tracking and should be capable of measuring discharge accurately in water depths from at least 0.2 m to 2.5 m. ☐
- The profiler should have a minimum of three transducer beams, operating at approximately 2 MHz. ☐
- The instrument shall provide parameters that can be used to assess the validity of the velocity and / or discharge measurement. These parameters must identify when conditions violate limits of the system, thus threatening data integrity, ie. Low signal correlation, unusually strong increases in signal intensity, high error velocities and uncertainty of water depth. ☐
- The following measurement accuracies will apply:
  - Velocity measurement range of at least 1.5 m/s. ☐
  - Velocity accuracy of  $\pm 1.0\%$  of measured velocity. ☐
  - The current should be measured in depth cells of a minimum of 3 cm., or better. ☐
  - The minimum blanking distance should be 3 cm., or better. ☐
- The instrument should be able to operate within the following environmental conditions: 0°C to 35°C ☐

- The instrument should have a built-in temperature sensor, which can measure between -2°C to 30°C with an accuracy of 0.5°C or better.

#### **5.2.3. Power Supply:**

- The power supply for the profiler and communication system should be commercially available dry cell battery / batteries or rechargeable sealed lead-acid battery / batteries. ☐
- The power switch to power up the complete system should be placed on the boat in such a manner that it has easy access to the operator – no unscrewing of lids, etc. ☐
- The communications antenna should also be fitted on or in the boat to minimise any damage by floating debris. ☐

#### **5.2.4. Communication:**

- Communication between the profiler and a hand-held unit shall preferably be via two-way radio telemetry or blue tooth technology. ☐
- The transceiver and / or the handheld unit shall preferably be powered by its own power supply. ☐

#### **5.2.5. Data Receiver:**

- The data receiver unit housing should be robust, corrosion resistant, UV protected, splash-proof and insensitive to vibration. ☐
- The unit should include a clearly visible backlit LC Display, simple membrane type key-pad interface or touch screen interface as well as a RS 232 communication interface. ☐
- A Software package for the automatic computation of discharge measurements, according to the relevant ISO & WMO standards, should be included within the hand-held unit and will be user friendly. ☐
- The unit should control the total gauging process and give the operator understandable instructions how to do the measurements. ☐
- The unit should be able to display the total discharge after the gauging is completed. ☐
- The hand-held unit should work adequately for at least 10 hours continuously on standard size commercially available dry cell batteries. ☐
- The memory should be of the non-volatile type so that data is not lost should the batteries become flat. ☐
- The gauging parameters, calculations, illustrations, tables, etc. should be able to be transferred to a PC / Laptop via a standard RS 232 port, IRDA or blue tooth technology. ☐

#### **5.2.6. Accessories:**

- The appropriate data transfer cable for extracting data from the hand-held unit to another PC or Laptop, should be included in the offer. ☐
- The appropriate tools to service and connect the equipment should be included in the offer. ☐

- All equipment should be packed in suitable robust instrument carry case/s. ☐
- A list of general spares / Services that are available on this instrument will be listed and priced in the Price Schedules – “Spares”. ☐

## 6. ACOUSTIC DOPPLER CURRENT PROFILER 3:

### 6.1. Application:

This instrument will also make use of the Acoustic Doppler principle and will mainly be utilised in small to medium streams / rivers and should include bottom tracking and GPS.

### 6.2. Design and technical details:

#### *The complete system should consist of the following:*

- Carrying Vessel, ie. Small Boat;
- Acoustic Doppler Current Profiler with bottom tracking;
- GPS;
- Power Supply;
- Communication System;
- Data Receiver; and
- Application Software.

#### *The following specifications will apply:*

#### 6.2.1. Carrying Vessel:

- The vessel must be robust, corrosion resistant, stream lined and the hull design should preferably be of the Catamaran or Tri-maran type. ☐
- The vessel shall be designed and be tested to be stable in rough water conditions and currents of up to 5 m/s. ☐
- The vessel should preferably not exceed the following dimensions and weight:  
1 500 mm long x 900 mm wide and 10 kg (boat alone). ☐
- The profiler shall be fitted to the vessel in such a manner that minimum damage to the profiler could be caused by any floating debris. ☐
- The power supply and communication system shall be built into a compartment on/in the vessel and should be watertight. ☐

#### 6.2.2. Acoustic Doppler Current Profiler:

- The instrument body must be robust, corrosion resistant, water tight and insensitive to vibration. ☐
- The instrument should include bottom tracking and must be able to measure accurate, within 1% of true water depth, in depths from at least 1.0 m to 20 m. ☐
- The profiler should have a minimum of three transducer beams, operating between 0.5 MHz and 5 MHz. ☐
- The following measurement accuracies will apply: ☐
  - Velocity measurement range of between 0.0 m/s and 5 m/s. ☐

- Velocity accuracy of  $\pm 0.5\%$  of measured velocity.
- The current should be measured in depth cells of a minimum of 10 cm., or better. ☐
- The instrument should be able to operate within the following environmental conditions:
 

0°C to 30°C	(Water Temperature)	<input type="checkbox"/>
-5°C to 45°C	(Air Temperature)	
- The instrument should have a built-in temperature sensor, which can measure between -2°C to 30°C with an accuracy of 0.5°C or better. ☐
- The instrument should also incorporate a compass / tilt sensor with the following accuracies:
 

○ Resolution	-	0.1°	
○ Precision	-	1°	
○ Pitch Accuracy	-	1°	<input type="checkbox"/>
○ Heading Accuracy	-	2°	
- The instrument shall provide parameters that can be used to assess the validity of the velocity and / or discharge measurement. These parameters must identify when conditions violate limits of the system, thus threatening data integrity, ie. Low signal correlation, unusually strong increases in signal intensity, high error velocities and uncertainty of water depth. ☐
- All other parameters related to the profiler operation should be easy selectable by the user. This includes depth cell size, number of depth cells and averaging time for each profile. ☐
- The instrument should include a GPS interface to receive GPS information and should be able to accept a NEMA GGA or NEMA VTG string. A good quality GPS receiver with accurate differential corrections for robust real-time operations with one second or faster update interval should be offered. ☐
- A profiler that could be fixed via a corrosion free bracket onto larger boats (3 – 5 m in length) should be offered as an optional item. ☐

#### **6.2.3. Power Supply:**

- The power supply for the profiler and communication system should be commercially available dry cell battery / batteries or rechargeable sealed lead-acid battery / batteries. ☐
- The power switch to power up the complete system should be placed on the boat in such a manner that it has easy access to the operator – no unscrewing of lids, etc. ☐
- The instrument should measure continuously for a period of 10 hours using an external 8 amp hour sealed, lead-acid battery. ☐
- Provision must be provided to protect against damage in the event of reverse polarity connection. In the event of such a connection, it should not be necessary to open the water-tight case to replace fuses or to reset the profiler. ☐

#### **6.2.4. Communication-, Cable- and Connector requirements:**

- The profiler shall be equipped with a data interface that conforms to the referenced industry standard EIA-232-D. Communication with the computer for purposes of setup and data acquisition shall be conducted through this interface. ☐
- Communication rates as low as 9 600 baud and at least as high as 115 200 ☐

baud shall be supported. The user shall be able to specify the communication rate for data acquisition.

- The profiler shall connect directly to its primary battery source and to the computer through a single, fully removable cable. ☐
- The cable shall be no longer than needed for use in a small boat, approximately 3 m, with longer versions of up to 30 m offered as an option. ☐
- The cable shall connect to the profiler through a keyed, self-purging, waterproof connector. The connector shall use a robust keying mechanism that will not easily degrade over time by the effects of frequent connect-disconnect cycles. ☐

#### **6.2.5. User Interface / Software:**

Software is required to interact with the profiler in real-time, to configure the profiler, and to display the results of measurement made with the profiler. ☐

##### **Computer Compatibility:**

- The software should run on a standard operating system, at least Windows 95/98, Windows NT, Windows 2000 and Windows XP. ☐
- The software shall be written in such a way that screen updates from the ADCP are displayed quickly enough to not interfere with the interpretation of the data being collected and resulting discharge being measured. ☐

##### **Profiler Firmware:**

- The profiler firmware updates, should it be deemed necessary, should be made by using some form of communications software and without requiring the user to open the profiler case. ☐

##### **System Configuration:**

- The user shall be able to use the software to configure the profiler and the software in preparation for discharge measurements. The user shall also be able to review and edit all information that has been entered for a measurement in a file for documentation purposes, and so that it may be used for other measurements. ☐
- The user shall be able to review and edit imported information prior to conducting measurement. ☐

##### **Diagnostic Tests:**

- Provision should be made in the software program for real-time and / or post-measurement diagnostics test. Such tests should verify that the various system components are operating properly and the data being collected are suitable for an accurate determination of discharge. ☐

##### **Real-Time Calculations:**

- The program shall perform the calculations required to determine discharge from the data acquired from the ADCP, including the following:
  - Measured discharge for each depth cell
  - Unmeasured, but estimated, discharges near to the surface and bottom.
  - The estimated discharge for both the left and right banks, and☐

- Summation of the total discharge measured to this point.
- Above estimated discharges shall be derived from commonly accepted and hydraulically sound methods. ☐

***Real-Time Displays:***

- The program shall provide display options for the user to observe the progress of ongoing measurements and monitor the status and quality of data being collected. ☐

***Text Displays:***

- The following minimum data will be displayed:
  - Velocity and Discharge for each ensemble and depth cell.
  - Signal intensity for each ensemble and depth cell.
  - Boat velocity, heading, pitch & roll and depth information for each ensemble.
  - Discharge measurement summary for each measurement, which could consist of four or more transects.
- The discharge measurement summary shall be updated with each acquired data ensemble and shall include the following:
  - Measurement number and location.
  - Configuration filename.
  - Data filenames.
  - Recording Status.
  - Course length and width.
  - Start and end dates and times.
  - Elapsed time.
  - Number of ensembles.
  - Cross-section areas.
  - Average depth.
  - Mean Flow Velocity
  - Discharge Summary

***Graphics Displays:***

- The following minimum graphics should be displayed:
  - Flow velocity profile.
  - Signal intensity profile.
  - Signal correlation profile.
  - Graphical depiction of method for velocity profile extrapolation.
  - Cross-section plots of flow velocity.
  - Cross-section plots of signal intensity.
  - Cross-section plots of signal correlation.
  - Boat path plots.
- Contours of the measured velocity over the width and depth of the cross-section shall also be displayed. ☐

***Discharge Measurement Summary:***

- The program shall compile and store an original record of the data acquired and calculated for each discharge measurement. The discharge summary should include the following:
  - Data acquired from the current profiler.
  - Data acquired from any optional navigation instruments used with the ADCP, such as GPS or echo sounders.
  - Data calculated by the program.
  - Discharge measurement summary, including:
    - Time and date of measurement.
    - Location of measurement.
    - Total discharge.

- Bank-section discharge estimates.
- Surface-layer and Bottom-layer discharge estimates.
- Mean depth.
- Mean flow velocity magnitude and direction.
- Cross-section and path-section widths and areas.
- Setup configuration.
- Measurement notes.

***Data Files:***

- Data files shall be stored in a binary format that is compatible with the Data Acquisition software as well as any other utility programs available with this instrument. ☐

**6.2.6. Accessories:**

- All the appropriate cables should be included in the offer. ☐
- The appropriate tools to service and connect the equipment should be included in the offer. ☐
- All equipment should be packed in suitable robust instrument carry case/s. ☐
- Where possible, a different type of small boat should be offered as optional. ☐
- A fully remote control boat, not longer than 3.0 m, could be offered as an option. ☐
- An inflatable boat, not longer than 3.5 m could be offered as an option. ☐
- The DGPS offer should include all registration / air-time / service provider fee/s for the two year contract period. ☐
- A list of general spares / Services that are available on this instrument will be listed and priced in the Price Schedules – “Spares”. ☐
- Software to eliminate discharge errors with the movement of river beds can be offered as an option ☐

## SECTION 3 (C)

### FLOW GAUGING BY DILUTION OF CHEMICALS

#### 1. SCOPE

This method will mainly be utilised in small to medium mountain streams in which normal conventional methods or Acoustic Doppler Technology cannot be used because of strong turbulence, steep gradients, non-uniform cross sections, large amounts of floating debris and too high flow velocities.

**An instrument measuring tracers with a Light Conductivity Fluorescent Meter can be offered as a SECOND option. (Tracer Instrument 2)**

The instruments offered should be an “off the shelf” complete system, which has been tested and used by various organisations for at least two years.

#### 2. TRACER INSTRUMENT 1:

##### 2.1. Design and technical details:

###### 2.1.1. Measuring Sensor / Probe:

- The measuring sensor / probe must be robust & corrosion resistant. ☐
- The instrument should be pre-calibrated in the factory before use in the field and should only be limited to cleaning on site. ☐
- The measuring sensor / probe should include a flexible cable, not less than 2 m and connector for the hand-held measuring unit. ☐
- The following measurement accuracies will apply:
  - Range of salinity gauging should be from zero to 2 000 mg/litre. An option to measure up to 5 000 mg/litre should also be offered. ☐
  - The response to salinity fluctuation should be at least 0.1 mg/litre, or better. ☐
  - The measuring accuracy should not exceed 2% of the maximum measuring range. ☐
  - The conductivity / salinity ( $\mu\text{S}/\text{mg/l}$ ) ratio should be between 1.750 and 1.800. ☐
  - The temperature measuring accuracy should not exceed 0.25°C. ☐
- The instrument should be able to operate within the following environmental conditions: 0°C to 35°C ☐

###### 2.1.2. Hand-held measuring Unit:

- The unit housing should be robust, corrosion resistant, UV protected, splash-proof and insensitive to vibration. ☐
- The unit should include a clearly visible LC Display, simple to use membrane type key-pad interface, probe connection plug and RS 232 communication interface. ☐
- The unit should be able to display the measured discharge directly after the salt cloud has passed the measuring point. ☐

- The internal memory should be of adequate size so that approximately 15 different measurements could be saved. ☐
  - The unit should work adequately for at least 25 hours on standard size commercially available dry cell batteries. ☐
  - The memory should be of the non-volatile type so that data is not lost should the batteries become flat. ☐
  - The following minimum information should be able to be entered into the hand-held measuring unit on site:
    - River Name / Station Name / Station Number
    - Place Name / Location Name
    - Operator's Name
    - Measuring Intervals
    - Weather Conditions
    - Staff Gauge / Water Level
    - Amount / Quantity of Salt
    - Length of Mixing / Injection Distance☐
  - The hand-held measuring unit should be able to store up to at least 900 measuring values per measuring site. ☐
  - The stored measurements on the hand-held unit must be able to be transferred to a PC/Laptop via the RS 232 communication port. ☐
- 2.1.3. Accessories:**
- The software to evaluate the acquired gauging data in form of graphs on the PC / Laptop should be included in the offer. ☐
  - The software should run on a standard operating system, at least Windows 95/98, Windows NT, Windows 2000 and Windows XP. ☐
  - The evaluation software should have the following minimum features:
    - Preparing the parameters for all measuring sites.
    - Visualization of gauging graph for each site.
    - Modification of major parameters of each measuring site.
    - Re-calculation of discharge for each site.
    - Saving of processed data files.
    - Exporting formatted data in ASCII – files for further analysis, eg. In Excell.
    - Printing of gauging data and graphs.
    - On-line help files explaining functions in detail☐
  - The appropriate data transfer cable for extracting data from the hand-held unit to another PC or Laptop, should be included in the offer. ☐
  - The appropriate tools to service and connect the equipment should be included in the offer. ☐
  - All equipment should be packed in suitable robust instrument carry case/s. ☐
  - A list of general spares / Services that are available on this instrument (calibration solution, cleaning solution, carry case, etc.) will be listed and priced in the Price Schedules – “Spares”. ☐

### 3. TRACER INSTRUMENT 2:

#### 3.1. Design and technical details:

The Bidder should submit a system other than TRACER INSTRUMENT 1 (in Paragraph 2 above). ☐

The Bidder shall offer any or all other additional components necessary to produce a fully operational instrument. ☐

All relevant literature, specifications, proposals, etc. should accompany the Bid documents. ☐

The Bidder can be requested to demonstrate a complete unit before the Bid is awarded to any contractor. ☐

The instruments offered should be an "off the shelf" complete system, which has been tested and used by various organisations for at least two years. ☐

##### 3.1.1. *Measuring Sensor / Probe:*

- The measuring sensor / probe must be robust & corrosion resistant. ☐
- The instrument should be pre-calibrated in the factory before use in the field and should only be limited to cleaning on site. ☐
- The measuring sensor / probe should include a flexible cable, not less than 2 m and connector for the hand-held measuring unit. ☐
- The following measurement accuracies will apply:
  - Range of salinity gauging should be from zero to 2 000 mg/litre. An option to measure up to 5 000 mg/litre should also be offered. ☐
  - The response to salinity fluctuation should be at least 0.1 mg/litre, or better. ☐
  - The measuring accuracy should not exceed 2% of the maximum measuring range. ☐
  - The conductivity / salinity ( $\mu\text{S}/\text{mg/l}$ ) ratio should be between 1.750 and 1.800. ☐
  - The temperature measuring accuracy should not exceed 0.25°C. ☐
- The instrument should be able to operate within the following environmental conditions: 0°C to 35°C ☐

##### 3.1.2. *Hand-held measuring Unit:*

- The unit housing should be robust, corrosion resistant, UV protected, splash-proof and insensitive to vibration. ☐
- The unit should include a clearly visible LC Display, simple to use membrane type key-pad interface, probe connection plug and RS 232 communication interface. ☐
- The unit should be able to display the measured discharge directly after the salt cloud has passed the measuring point. ☐
- The internal memory should be of adequate size so that approximately 15 different measurements could be saved. ☐

- The unit should work adequately for at least 25 hours on standard size commercially available dry cell batteries. ☐
- The memory should be of the non-volatile type so that data is not lost should the batteries become flat. ☐
- The following minimum information should be able to be entered into the hand-held measuring unit on site:
  - River Name / Station Name / Station Number
  - Place Name / Location Name
  - Operator's Name
  - Measuring Intervals
  - Weather Conditions
  - Staff Gauge / Water Level
  - Amount / Quantity of Salt
  - Length of Mixing / Injection Distance☐
- The hand-held measuring unit should be able to store up to at least 900 measuring values per measuring site. ☐
- The stored measurements on the hand-held unit must be able to be transferred to a PC/Laptop via the RS 232 communication port. ☐

#### **2.1.3. Software:**

- The software to evaluate the acquired gauging data in form of graphs on the PC / Laptop should be included in the offer. ☐
- The software should run on a standard operating system, at least Windows 95/98, Windows NT, Windows 2000 and Windows XP. ☐
- The evaluation software should have the following minimum features:
  - Preparing the parameters for all measuring sites.
  - Visualization of gauging graph for each site.
  - Modification of major parameters of each measuring site.
  - Re-calculation of discharge for each site.
  - Saving of processed data files.
  - Exporting formatted data in ASCII – files for further analysis, e.g. In Excel.
  - Printing of gauging data and graphs.
  - On-line help files explaining functions in detail☐

#### **2.1.4. Accessories:**

- The appropriate data transfer cable for extracting data from the hand-held unit to another PC or Laptop, should be included in the offer. ☐
- The appropriate tools to service and connect the equipment should be included in the offer. ☐
- All equipment should be packed in suitable robust instrument carry case/s. ☐
- A list of general spares / Services that are available on this instrument (calibration solution, cleaning solution, carry case, etc.) will be listed and priced in the Price Schedules – “Spares”. ☐